

Shephard, R.J., Collins, R., Silverman, F. "Passive" Exposure of Asthmatic Subjects to Cigarette Smoke" Environmental Research 20: 392-402, 1979.

SUMMARY: Fourteen asthmatic subjects volunteered for a controlled trial of 2-hr passive exposure to cigarette smoke. Seven cigarettes were burnt in a closed room of 14.6-m<sup>3</sup> capacity, producing a carbon monoxide concentration 24 ppm above ambient and a suspended particulate concentration of 2-4 mg\*m<sup>3</sup>. Most symptomatic responses were as in normal individuals, but there were more complaints of wheezing (36%) and tightness in the chest (43%). Changes of pulmonary function were slight. Relative to the corresponding control exposure, there was a small decrease of total lung capacity as assessed by helium mixing (P 0.02), possibly indicating an effect of the smoke on small airways. There was also some evidence of arousal and or emotional excitement, including a slight tachycardia (at 80-min exposure, P 0.05) and a slight increase of forced vital capacity (P 0.05 at 90-min exposure). However, dynamic lung volumes (FEV<sub>1.0</sub>, V<sub>max50%vc</sub>, V<sub>max25%vc</sub>) were unaltered. Examining separately the four subjects who claimed sensitivity to cigarette smoke, the only significant difference from the remaining asthmatic individuals was a greater FEV<sub>1.0</sub> relative to the corresponding time in the control exposure. Our data thus do not suggest that asthmatic subjects have an unusual sensitivity to cigarette smoke.

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